

Appendix B

Appendix B shows a comparison of the amino acid sequences of the LKR domains of the bifunctional LKR/SDH proteins from Arabidopsis, corn and soybean, SEQ ID NOs: 112, 122 and 121, respectively, and the yeast monofunctional lysine-forming SDHs (gi: 453184, 1170847, and 173262). Amino acids conserved among at least one plant sequence and at least one yeast sequence are indicated with an asterix (*) on the top row; amino acids conserved among at least two plant sequences are indicated by a plus (+) above the alignment; dashes are used by the program to maximize the alignment of the sequences.

GI: 173262 GGWKDVLSRFPAGNGTLYDLEFLEDDNGRRVAAGFGHAG-----FA

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LKR domain of SEQ ID NO:112 DIGGSIEFVNRLTIDSPPFRRFMPNSNNSYDDMDGVLCLMADVLDILPTEFAKEASQHFGD
LKR domain of SEQ ID NO:122 DIGGSIEFINKSTSIERPFFRYPSKNSYHDMEGAVGVCLAVLDILPTEFSKEASQHFGN
LKR domain of SEQ ID NO:121 DIGGSIEFVNRTGTSIDSPPFYRDPTNSYHDMEGAVGVCLAVLDILPTEFAKEASQHFGN
GI: 453184 NPHNPPIYTVATV-----FNKPTLVPTTVGPKLSVI-SIDHLPSSLPREASEFFSH
GI: 1170847 NPHNPPIPVYETATV-----FNEPTEVVKLDGPKLSVC-SIDHLPSSLPREASEFFAK
GI: 173262 NPHNPPIPVYTTATT-----FDHPTVEVETTAGPKLSCV-SIDHLPSSLPREASEFASE

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LKR domain of SEQ ID NO:112
LKR domain of SEQ ID NO:122
LKR domain of SEQ ID NO:121
GI: 453184
GI: 1170847
GI: 173262
ILSGFVGSLASMTEISDLP AHLK RAC ISYRG ELT SLYE-YIPRMRKS NPE
ILSRLV ASI LASV KQPAELPS YLRRACIAHAGR LTP LYE-YIPRMRNT MID
ILSQFVVNLASATDITKLPAHL RACIAHKGV L TS LYD-YIPRMRSS D S-
DL--LPSLELLPQ RKTAPVW VRA-----KKLFDR HCARVKRSS RL
DL--MPSLLELPN RD TSPV W VRA-----KQLFDK HVAR LDKE---
AL--LPSL LQLP QRD TAPV W TRA-----KALFDK HV L RIG E----